The opinion in support of the decision being entered today was **not** written for publication and is **not** binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte TAO ZHANG, KEVIN ARTHUR GOMEZ, QIANG BI, MINGZHONG DING, and STEPHEN KOW CHIEW KUAN

Appeal No. 2005-1867
Application 09/896,895

ON BRIEF

Before KRASS, DIXON, and MACDONALD, **Administrative Patent Judges.**

MACDONALD, **Administrative Patent Judge.**

DECISION ON APPEAL

This is a decision on appeal from the final rejection of claims 1-4, 9, 11, 12, 15-20, and 25. Claims 5-8, 10, 13, 14, 21-24, and 26 have been canceled.

Invention

Appellants' invention relates to servo systems that employ a real-time adaptive loop-shaping scheme that provides for detection of, and adjustment for, disturbances in the servo system. Appellants' specification at page 2, lines 8-11.

Claim 1 is representative of the claimed invention and is reproduced as follows:

1. An apparatus comprising:

a vibration damping circuit coupled to receive a driving energy signal; and

a real-time adaptive loop shaping circuit configured to detect vibration energy in a position error signal in real-time, and to responsively adjust, in real-time, at least one parameter of a transfer function of the vibration damping circuit to reduce vibration at different frequencies in the driving energy signal received by the vibration damping circuit.

References

The references relied on by the Examiner are as follows:

Appellants' admitted prior art at figure 2 (AAPA)

Sidman et al. (Sidman)	5,155,422	October 13, 1992
Ottesen et al. (Ottesen)	6,417,982	July 9, 2002 (Filed December 2, 1998)

Rejections At Issue

Claims 1-3, 9, 11, 12, 15-19, and 25 stand rejected under 35 U.S.C. § 103 as being obvious over the combination of AAPA and Ottesen.

Claims 4 and 20 stand rejected under 35 U.S.C. § 103 as being obvious over the combination of AAPA, Ottesen, and Sidman.

Throughout our opinion, we make references to the Appellants' briefs, and to the Examiner's Answer for the respective details thereof.[1]

OPINION

With full consideration being given to the subject matter on appeal, the Examiner's rejections and the arguments of the Appellants and the Examiner, for the reasons stated **infra**, we reverse the Examiner's rejection of claims 1-4, 9, 11, 12, 15-20, and 25 under 35 U.S.C. § 103.

Only those arguments actually made by Appellants have been considered in this decision. Arguments that Appellants could have made but chose not to make in the brief have not been considered. We deem such arguments to be waived by Appellants

[1]Appellants filed an appeal brief on May 26, 2004. Appellants filed a reply brief on November 01, 2004. The Examiner mailed an Examiner's Answer on September 1, 2004.

[see 37 CFR § 41.37(c)(1)(vii) effective September 13, 2004 replacing 37 CFR § 1.192(a)].

Whether the Rejection of Claims 1-4, 9, 11, 12, 15-20, and 25 Under 35 U.S.C. § 103 is proper?

It is our view, after consideration of the record before us, that the evidence relied upon and the level of skill in the particular art would not have suggested to one of ordinary skill in the art the invention as set forth in claims 1-4, 9, 11, 12, 15-20, and 25. Accordingly, we reverse.

In rejecting claims under 35 U.S.C. § 103, the Examiner bears the initial burden of establishing a **prima facie** case of obviousness. **In re Oetiker**, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). **See also In re Piasecki**, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984). The Examiner can satisfy this burden by showing that some objective teaching in the prior art or knowledge generally available to one of ordinary skill in the art suggests the claimed subject matter. **In re Fine**, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). Only if this initial burden is met does the burden of coming

forward with evidence or argument shift to the Appellants. **Oetiker**, 977 F.2d at 1445, 24 USPQ2d at 1444. **See also Piasecki**, 745 F.2d at 1472, 223 USPQ at 788.

An obviousness analysis commences with a review and consideration of all the pertinent evidence and arguments. "In reviewing the [E]xaminer's decision on appeal, the Board must necessarily weigh all of the evidence and argument." **Oetiker**, 977 F.2d at 1445, 24 USPQ2d at 1444. "[T]he Board must not only assure that the requisite findings are made, based on evidence of record, but must also explain the reasoning by which the findings are deemed to support the agency's conclusion." **In re Lee**, 277 F.3d 1338, 1344, 61 USPQ2d 1430, 1434 (Fed. Cir. 2002).

With respect to independent claim 1, Appellants argue at page 5 of the brief, that the references fail to teach operation in "real-time" as required by claim 1. The Examiner rebuts this argument by pointing out at page 5 of the answer, that "real-time" is taught because in Ottesen "once the initial coefficient values are determined and the notch filter is activated (step 218) subsequent iterations are performed while the notch filters are active." We do not agree with the Examiner's analysis.

Firstly, we find nothing in Ottesen that teaches adjusting the values of the same filter or filters in an iterative process. Rather, Ottesen teaches that subsequent filters are activated

(col. 9, line 12) and adjusted. While this is a sequential process, it is not an iterative process. Secondly, even if Ottesen taught an iterative process, we see nothing that requires this be in "real-time" as contended by the Examiner. We have reviewed the rejection and find nothing that establishes Ottesen determining and adjusting in real-time (during the normal operating process), i.e. the determining and adjusting are performed at the same time the head is reading data (the normal operating process of the Ottesen device).

We find that the Examiner has not met the initial burden of establishing a **prima facie** case of obviousness. Therefore, we will not sustain the Examiner's rejection under 35 U.S.C. § 103.

Conclusion

In view of the foregoing discussion, we have not sustained the rejection under 35 U.S.C. § 103 of claims 1-4, 9, 11-12, 15-20, and 25.

REVERSED

ERROL A. KRASS)
Administrative Patent Judge)
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) BOARD OF PATENT
JOSEPH L. DIXON) APPEALS AND
Administrative Patent Judge) INTERFERENCES
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ALLEN R. MACDONALD)
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